VIP XD HD

VIP-XDHD

BOSCH

en Installation Guide

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1 Safety

1.1 Electric shock hazard

- Never attempt to connect the unit to any power network other than the type for which it is intended.
- Use only the power supply unit that is included.
- Connect the unit to an earthed mains socket-outlet.
- Never open the housing.
- Never open the housing of the power supply unit.
- If a fault occurs, disconnect the power supply unit from the power supply and from all other units.
- Install the power supply and the unit only in a dry, weather-protected location.
- If safe operation of the unit cannot be ensured, remove it from service and secure it to prevent unauthorized operation. In such cases, have the unit checked by Bosch Security Systems.

  Safe operation is no longer possible in the following cases:
  - if there is visible damage to the unit or power cables,
  - if the unit no longer operates correctly,
  - if the unit has been exposed to rain or moisture,
  - if foreign bodies have penetrated the unit,
  - after long storage under adverse conditions, or
  - after exposure to extreme stress in transit.

1.2 Installation and operation

- The relevant electrical engineering regulations and guidelines must be complied with at all times during installation.
- Relevant knowledge of network technology is required to install the unit.
- Before installing or operating the unit, make sure you have read and understood the documentation for the other equipment connected to it, such as monitors. The documentation contains important safety instructions and information about permitted uses.
- Perform only the installation and operation steps described in this manual. Any other actions may lead to personal injury, damage to property or damage to the equipment.

1.3 Maintenance and repair

- Never open the housing of the unit. The unit does not contain any user-serviceable parts.
- Never open the housing of the power supply unit. The power supply unit does not contain any user-serviceable parts.
- Ensure that all maintenance or repair work is carried out only by qualified personnel (electrical engineers or network technology specialists).

CAUTION!
Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

1.4 Software

- VIP XD HD may only be operated with the installed software products.
- It is not allowed to install additional software.

2 Short information

2.1 About this manual

This manual is intended for persons responsible for the installation and operation of the VIP XD HD decoder. International, national and any regional electrical engineering regulations must be followed at all times. Relevant knowledge of network technology is required. The manual describes the installation and operation of the unit.

2.2 Conventions in this manual

In this manual, the following symbols and notations are used to draw attention to special situations:

CAUTION!
This symbol indicates that failure to follow the safety instructions described may endanger persons and cause damage to the unit or other equipment.
It is associated with immediate, direct hazards.

NOTICE!
This symbol refers to features and indicates tips and information for easier, more convenient use of the unit.

2.3 Intended use

The VIP XD HD High Definition video decoder receives and decodes video signals over data networks (Ethernet LAN, Internet) and displays High Definition and Standard Definition video from cameras and encoders using H.264 or MPEG-4 encoding at up to 30 images per second. The unit is intended for use with CCTV systems. Other applications are not permitted.
In the event of questions concerning the use of the unit which are not answered in this manual, please contact your sales partner or:
Bosch Sicherheitssysteme GmbH
Werner-von-Siemens-Ring 10
85630 Grasbrunn
Germany
www.boschsecurity.com

2.4 EU Directives

The VIP XD HD High Definition video decoder complies with the requirements of EU Directives 89/336 (Electromagnetic Compatibility) and 73/23, amended by 93/68 (Low Voltage Directive).

2.5 Rating plate

For exact identification, the model name and serial number are inscribed on the bottom of the housing. Please make a note of this information before installation, if necessary, so as to have it to hand in case of questions or when ordering spare parts.

3 System overview

3.1 Parts included

- VIP XD HD High Definition video decoder
- 1 international power supply unit with EU and US power cord
- 4 screw-on stands
- 1 monitor mounting kit
- 1 Installation Manual
- Adhesive MAC address labels

NOTICE!
Check that the delivery is complete and in perfect condition. Arrange for the unit to be checked by Bosch Security Systems if you find any damage.

3.2 Overview of functions

High Definition video decoder
The VIP XD HD decoder displays high definition and standard definition video from cameras and encoders using H.264 or MPEG-4 encoding at up to 30 images per second over IP networks. It can decode four H.264 720p30 streams at 10 Mbps or two 1080p30 streams at 10 Mbps. Alternatively, it can simultaneously decode six H.264 Standard Definition streams at up to 6 Mbps from fast-moving AutoDome cameras with the highest clarity. When H.264 Standard Definition streams at up to 2.5 Mbps from medium activity scenes are connected, up to twelve streams can be displayed.
The VIP XD HD decoder can drive a HD display directly, and so is ideally suited for applications with flat-screen monitor walls. Compact in size in relation to its decoding power, VIP XD HD is perfect for any display application that requires space-saving solutions.

Remote control
Control the viewing mode remotely and establish the video connections using Bosch's comprehensive video management systems.

Operating system
VIP XD HD is based on the latest Intel H67 Express Chipset on a Mini-ITX board with a Core i3 CPU running at 3.1 GHz. The system has a 8 GB Flash module as boot medium for operating system and application. It uses a Gigabyte Ethernet port.
The system runs a tailored and Bosch-branded Microsoft Windows 7 Embedded operating system, and Monitor Wall software based on HD-capable VideoSDK 5, both finetuned for High Definition video decoding support. The VIP XD HD decoder provides three monitor outputs, DVI-I, HDMI and DP; only one of these can be used at the same time.

High performance

Transmit High Definition IP video to a high-performance VIP XD HD decoder and present it with ultimate clarity on a large, flat-screen HD monitor, for example, a high-performance 26" or 42" Bosch HD LCD monitor. VIP XD HD is capable of decoding two full HD 1080p30 streams or four 720p30 streams, for example, displayed in quad view. It can handle up to six Standard Definition streams at up to 6 Mbps with full resolution and frame rate, and display it in a 2 × 3 view on a 16:9 monitor. At a lower resolution, bit rate, or frame rate, VIP XD HD is capable of displaying up to 30 video streams in a 5 × 6 view, arranged in various selectable screen layouts.

Layouts can be switched at any time during operation, initiated by the controlling video management system. Layout switching can be based on alarm scenarios.

Access security

VIP XD HD decoders offer various security levels for accessing the network, the unit, and the data channels. System access is password-protected with two levels. For total data protection, each communication channel can be independently AES encrypted with 128 bit keys, once the encryption site license has been applied.

Easy upgrade

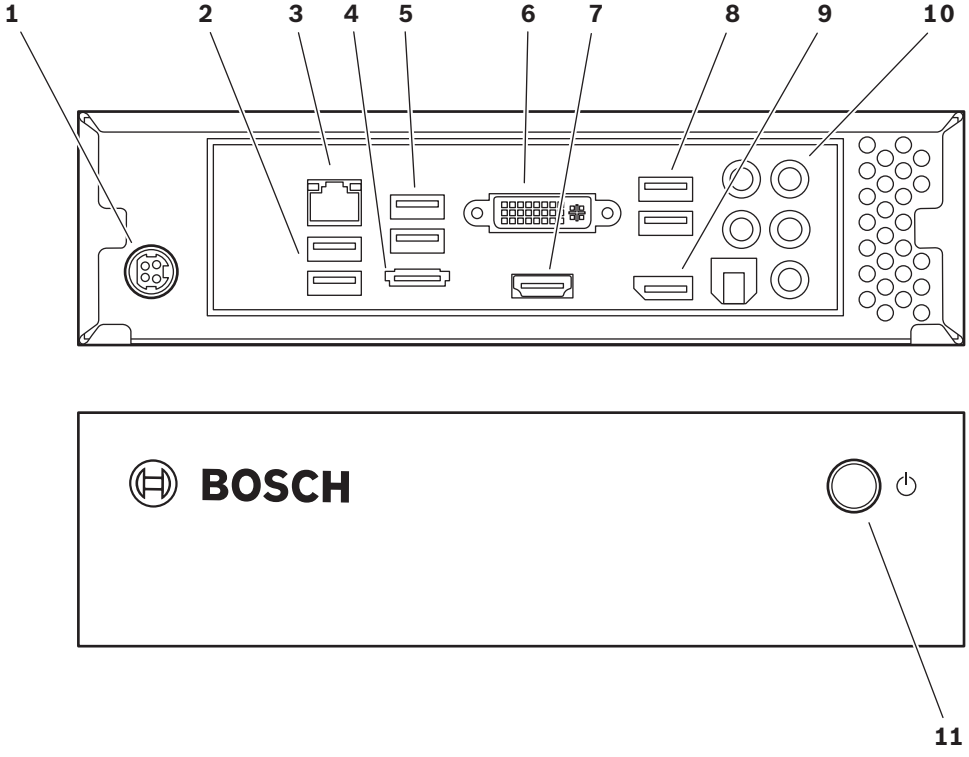
Remotely upgrade the VIP XD HD decoders whenever new software becomes available. This ensures up-to-date products, thus protecting investment with little effort.

Summary

The VIP XD HD High Definition decoder provides the following main functions:

- Receiving and decoding video and data over IP data networks
- H.264 or MPEG-4 decoding at up to 30 images per second
- Decoding of four H.264 High Definition streams with 720p30 at 10 Mbps or two streams with 1080p30 at 10 Mbps at the same time
- Decoding of up to six H.264 Standard Definition streams at up to 6 Mbps at the same time
- Integrated Ethernet port (10/100/1000 Base-T)
- Configuration and remote control of all internal functions via TCP/IP, also secured via HTTPS
- Password protection to prevent unauthorized connection or configuration changes
- Convenient maintenance via uploads

3.3 Connections, controls and displays



1 Power supply socket
for connecting the power supply unit that is included

2 USB ports

3 RJ45 socket
for connecting to an Ethernet LAN (local network), 10/100/1000 MBit Base-T

4 eSATA port
disabled

5 USB ports

6 DVI-I monitor socket
for connecting a monitor via DVI-I cable

7 HDMI monitor socket
for connecting a monitor via HDMI cable

8 USB ports

9 DP monitor socket
for connecting a monitor via DP cable

10 Audio connections (mono)
unused

11 Main switch
for switching the unit on and off, lights up blue when the unit is switched on

NOTICE!
For more information about the LEDs, see *Section 7.2 Power light and LEDs, page 15*.

4 Installation

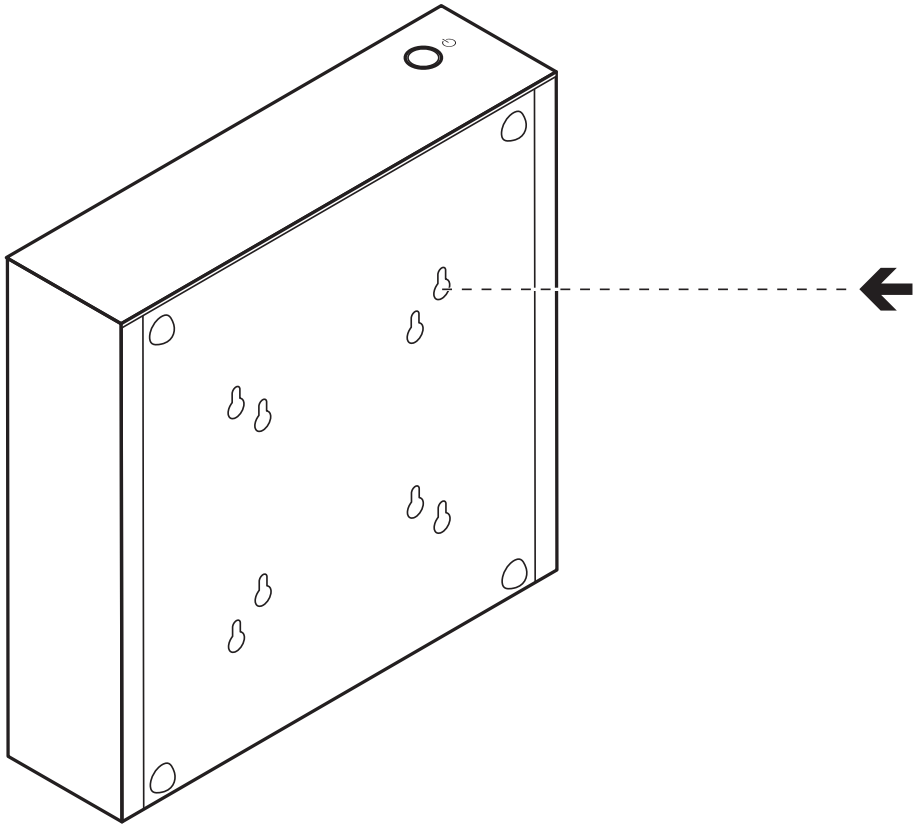
4.1 Preparations

CAUTION!
VIP XD HD and the power supply unit are both intended for use indoors only.
Select a suitable location for installation that guarantees to meet the environmental conditions. The ambient temperature must be between 0 and +40 °C (+32 and +104 °F). The relative humidity must not exceed 90%.
VIP XD HD and the power supply unit generate heat during operation, so you should ensure that there is adequate ventilation and enough clearance between both units and heat-sensitive objects or equipment. Please note the maximum heat value of 460 BTU/h for the VIP XD HD decoder.

Please ensure the following installation conditions:

- Do not install VIP XD HD or the power supply unit close to heaters or other heat sources. Avoid locations exposed to direct sunlight.
- All ventilation openings must be kept free from blockings. Do not stack several units one on top of each other. Do not put any unit to an upright position.
- Allow sufficient space for running cables.
- Ensure that both VIP XD HD and the power supply unit have adequate ventilation.
- When making connections, use only the cables supplied or use appropriate cables immune to electromagnetic interference.
- Position and run all cables so that they are protected from damage, and provide adequate cable strain relief where needed.
- Avoid impacts, blows and severe vibrations that exceed the specification limits (see *Section 10 Technical data, page 18*), as these can irreparably damage the VIP XD HD decoder.

4.2 Mounting



You can mount the VIP XD HD decoder to an approved monitor using the supplied mounting kit.

CAUTION!

The mounting location must be able to reliably hold the unit. The load-bearing capacity must be adequate for four times the weight of the unit.

If mounting the unit to the back of a monitor, use only monitors that are approved by Bosch Security Systems.

When mounting the unit on the rear side of a monitor, ensure that there is adequate ventilation and enough clearance between both units and walls or other monitors, especially with several monitors mounted side by side on a wall.

NOTICE!

You can obtain a list of approved monitors from your supplier or directly from Bosch Security Systems. This list is constantly being updated and extended.

As an alternative you can screw on the four stands supplied to the bottom of the VIP XD HD decoder and place the unit upon an appropriate flat surface from which it cannot fall down.

5 Connection

5.1 Sequence of connections

CAUTION!
Do not connect the VIP XD HD decoder to the power supply until all other connections have been made. Otherwise the automatic assignment of the IP address will fail and a faulty monitor resolution will be set. The may lead to serious damage of the unit.

5.2 Monitor

NOTICE!
You can obtain a list of approved monitors from your supplier or directly from Bosch Security Systems. This list is constantly being updated and extended.

You must connect a suitable monitor to the VIP XD HD decoder. The unit provides three monitor outputs, DVI-I, HDMI and Display Port. You can select one of the monitor outputs for the connection. The simultaneous use of several outputs is not possible.

CAUTION!
When connecting a monitor to the DVI-I output, do not use a DVI-to-VGA adapter.
The monitor must be equipped with a DVI input.

1. Connect the monitor to the DVI-I monitor socket using a monitor cable with DVI-I plugs.
2. As an alternative both of the other monitor sockets (HDMI or DP) can be used.

5.3 Network

You must connect the VIP XD HD decoder to a 10/100/1000 Base-T network using a standard UTP category 5 cable with RJ45 plugs. If a network connection has been set up correctly, the LEDs on the RJ45 socket light up. A flashing LED signals that data packages are being transmitted over the network.

▶ Connect the unit to the network via the RJ45 socket.

5.4 Power

Power is supplied via a separate power supply unit that is part of the delivery.

CAUTION!
Use only the power supply unit that is included, together with the suitable power cord.
Connect the unit to an earthed mains socket-outlet.
Do not connect the VIP XD HD decoder to the power supply until all other connections have been made.

1. Connect the VIP XD HD decoder to the power supply unit.
2. Select the suitable power cord and plug this into the power supply unit and then into the mains.

The unit is now ready for use.

5.5 Power on/power off

VIP XD HD is equipped with a power switch on its front panel.

1. Press the power switch on the front once to switch on the unit. The blue light inside the switch lights up.
2. To switch off press the power switch again. The blue light turns off.
3. Switch on the monitor in order to see the user interface after the boot-up procedure.

NOTICE!
All information regarding the functions and the operation can be found in the relevant documentation of Monitor Wall, Bosch Video Management System, or Bosch Video Client.

6 Configuration

6.1 Setup

The setup procedure is carried out via Bosch Video Client or other management systems. You must at least assign a valid IP address to operate on your network.

NOTICE!
All information regarding the configuration can be found in the relevant documentation of the video management system in use.

6.2 Setup using Bosch Video Client

The **Bosch Video Client** program can be downloaded from the product catalog on the Bosch Web site. This program allows you to implement and set up VIP XD HD in the network quickly and conveniently.

Installing the program

1. Download **Bosch Video Client** from the product catalog on the Bosch Web site to the computer with which you want to set up VIP XD HD.
2. Follow the instructions on the screen to complete the installation.

Configuring VIP XD HD

You can start Bosch Video Client immediately after installation.

1. Double-click the

icon on the desktop to start the program. Alternatively, start the application via the Start button and the Programs menu (path: Start/Programs/Bosch Video Client/Bosch Video Client).
2. Click to open the Configuration Manager application. After the application has started, the network is immediately searched for compatible units.
3. You can start the configuration if your VIP XD HD is shown in the list in the left section of the window. To do this, right-click the entry for the unit.
4. Click **Device Network Settings...** in the popup menu.
5. In the **Device IP address** field, enter a valid IP address to operate on your network (for example **192.168.0.10**) and click **OK**. A software restart is triggered automatically and the IP address is valid.
6. If required, enter an appropriate subnet mask for the IP address, and additional network data and click **OK**.

Software restart

You can trigger the software restart directly with the assistance of Configuration Manager.

▶ Right-click the entry for the unit in the list in the left section of the window and select the **Reset** command from the context menu.

Additional parameters

You can check and set additional parameters with the assistance of Configuration Manager. You can find detailed information on this in the documentation for this program.

7 Troubleshooting

7.1 General malfunctions

If you are unable to resolve a malfunction, please contact your supplier or systems integrator, or go directly to Bosch Security Systems Customer Service.
The following tables are intended to help you identify the causes of malfunctions and correct them where possible.

Malfunction	Possible causes	Recommended solution
No image display.	Monitor settings.	Check the input selection at the monitor.
	Faulty cable connections.	Check all cables, plugs and connections.
	Monitor fault.	Connect another monitor to the unit or use another monitor connection.
The unit is not operational after a firmware upload.	Power failure during programming by firmware file.	Have the unit checked by Customer Service and replace if necessary.
	Incorrect firmware file.	Have the unit checked by Customer Service and replace if necessary.
The power light is not lit.	Unit not switched on.	Press the main switch on the front panel.
	Unit not connected to the power supply unit.	Check all cables, plugs and connections.
	Power supply unit not connected to the mains outlet.	Check all cables, plugs and connections.

7.2 Power light and LEDs

VIP XD HD has a light inside the power switch on its front and two LEDs on the RJ45 socket on the rear that show the operating status:

Power light

Off:	VIP XD HD is switched off or not connected to the power
Lights up blue:	VIP XD HD is switched on

RJ45 socket LEDs

Left LED:	Off: LAN connection not established Green: LAN connection established Blinking green: LAN activity occurring
Right LED:	Off: 10 Mbps data rate Green: 100 Mbps data rate Yellow: 1000 Mbps data rate

8 Maintenance

8.1 Updates

Software updates are carried out via Configuration Manager or other management systems in use. Please refer to the relevant documentation.

8.2 Repairs

CAUTION!

Never open the housing of the VIP XD HD decoder. The unit does not contain any user-serviceable parts.

Never open the housing of the power supply unit. The power supply unit does not contain any user-serviceable parts.

Ensure that all maintenance or repair work is carried out only by qualified personnel (electrical engineers or network technology specialists). In case of doubt, contact your dealer's technical service center.

9 Setting out of order

9.1 Transfer and disposal

VIP XD HD should only be passed on together with this installation and operating manual. Your Bosch product is designed and manufactured with high-quality materials and components which can be recycled and reused.

This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste.
In the European Union, there are separate collection systems for used electrical and electronic products. Please dispose of this equipment at your local community waste collection/recycling center.

10 Technical data

10.1 Electrical

Power supply	Wide-range, external, included in the box
Input voltage	100 to 240 VAC, 50/60 Hz
Power consumption	Approx. 90 W, 135 W max.

10.2 Mechanical

Dimensions (H × W ×D)	58 × 225 × 217.8 mm (2.283 × 8.858 × 8.575 in)
Weight	Approx. 3 kg (6.6 lb)
VESA mount	75 × 75 mm or 100 × 100 mm (2.953 × 2.953 in or 3.937 × 3.937 in)
Video	1 of 3 outputs, connector DVI-I, or HDMI, or DP, no VGA support
Front indicator	1 × power switch with integrated blue LED
Rear connectors	1 × power connector 6 × USB 1 × Ethernet port 1 × DVI-I monitor output 1 × HDMI monitor output 4 × audio connector, unused

10.3 Environmental conditions

Operating temperature	0 °C to +40 °C (+32 °F to +104 °F)
Relative humidity	0 to 90% atmospheric humidity, non-condensing
Thermal value	Approx. 310 BTU/h, 460 BTU/h max.

10.4 Certifications and approvals

Safety	IEC 60950
Electromagnetic compatibility	EN55022 EN55024 FCC 47 CFR Chapter 1 Part 15

10.5 Standards

Video	H.264 (ISO/IEC 14496-10), MPEG-4
Video data rates	HD: up to 20 Mbps, single stream SD: up to 6 Mbps per stream
GOP structure	I, IP, IBBP
Monitor resolutions	DVI-I: 1920 × 1200 max. (WUXGA) at 60 Hz HDMI: 1920 × 1200 max. (WUXGA) at 60 Hz DP: 2560 × 1600 max. (WQXGA) at 60 Hz
Ethernet	10/100/1000 Base-T, auto-sensing, half/full duplex, RJ45
Protocols	RTP, Telnet, UDP, TCP, IP, HTTP, HTTPS, FTP, DHCP, IGMP V2/ V3, ICMP, ARP, SMTP, SNTP, SNMP (V1, MIB-II)
Encryption	TLS 1.0, SSL, AES (optional)

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